New Construction Passive Radon Piping

Under all slabs install 6 mil poly on top of at least 4” of crushed stone, no smaller than 1/2” in size.

Install either a complete loop of perforated 4” piping laid into the gravel around the interior of the footer or if the basement is under 1000 sf install 20 feet of perforated pipe out into the center of the gravel.

Install radon piping from the perforated piping below the slab up through the house to the roof. Use either 3” or 4” schedule 20 (Sewer & Drain) or schedule 40 pvc piping and fittings for the radon pipe. Do not use styrene (milky white) fittings or pvc piping with a black coating inside. All joints must be carefully glued and the pipe must be pitched back to the slab gravel.

All occupied slabs must have radon piping, especially if the slab is flush with the top of the deck or has ducts in the slab. This piping can be connected to the same radon pipe routed up through the house. Do not cantilever first floor deck into the garage over the garage gravel.

When routing the 3” or 4” pvc up through house walls it is better to route through interior walls but you can route up through an exterior insulated wall. Avoid routing radon pipe up through the master bedroom walls and never route the pipe into a cathedral ceiling area.

The 3” or 4” radon pipe should exit the rear roof and must have at least 24” of vertical rise in the attic in order to install the radon fan. Note: The radon fan must be installed in the attic.

The entire perimeter of the basement slab needs to be caulked to the foundation wall using a urethane based caulk. Wait at least 60 days after concrete has been poured before caulking the concrete floor to allow adequate shrinkage.

Electrical Code requires a light to be installed in the attic if there is mechanical equipment in the attic. Install a pull chain light rather than a switched light in the attic. This light can then be used as the power source for the radon fan.

Call (610) 346-8004 or email wmbrodhead@hotmail.com if you have any questions.

The International Residential Code (IRC), which replaces the BOCCA code, includes Radon Resistant New Construction recommendations in Appendix F. It is up to each township in Pennsylvania to decide if they will require these recommendations for all new home construction. Go to WPB website to download a copy of Appendix F in the RRNC info page.
Passive Radon Venting (No Fan)

- Piping under slab on grade
- Piping from each gravel bed to roof
- Piping under crawl space slab
- 24" of vertical pipe in attic for fan installation
- 3" PVC piping or larger
- Perforated piping around perimeter of the gravel bed or at least a "Tee" fitting
- Air tight lid on sump pit
- Clean gravel under all slabs
- Seal all cracks or openings in the slab
- Power in attic for fan installation
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